

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 98-108

REVISION TO SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER No. 95-132 FOR:

ALLIEDSIGNAL, INCORPORATED

for the FORMER BARON BLAKESLEE FACILITY located at
8333 ENTERPRISE DRIVE
NEWARK, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location:** The site is located at 8333 Enterprise Drive, Newark, Alameda County. It is located west of I-880 and east of Willow Street in an area with various industrial and commercial uses.
2. **Site History:** Prior to 1972, the property was owned by Creed and Eleanor Jenkins. At that time the site was undeveloped. From 1984 until 1998, the property was owned by Clarence and Joan Mayhew. The property is currently owned by Gallade Enterprise LLC and is leased to Gallade Chemical, Inc. (Gallade).

By late 1972, an on-site facility was constructed by Purex Industries, Inc., to store and distribute virgin chemical products. In 1985, recovery of chlorinated and fluorinated solvents from waste liquids was also conducted on-site by Baron Blakeslee, Inc. In April 1993, Baron Blakeslee ceased its solvent recovery operation at the site and proceeded to close its hazardous waste management units (HWMUs) in accordance with its operating permit requirements. The HWMUs were cleaned and closed according to the Department of Toxic Substances Control's (DTSC) requirements. The facility is currently owned and operated by Gallade for storage and distribution of virgin chemical products.

On June 30, 1970, Baron Blakeslee, Inc. merged with Purex Corporation and became a division of Purex Corporation. In 1978 Purex Industries, Inc. was incorporated in Delaware and acquired all of the stock of Purex Corporation. In 1982, the assets and liabilities for the Baron Blakeslee Division (of Purex Corporation) were transferred to Baron Blakeslee, Inc., a Delaware Corporation (Baron Blakeslee/Del). Baron Blakeslee/Del then executed an agreement assuming all liabilities relating to the former Baron Blakeslee Division. Purex Industries, Inc., which is still in business, became the parent company of both Baron Blakeslee/Del and Purex Corporation. In 1985, Purex Industries, Inc. sold Baron Blakeslee/Del to Allied Corporation, which later became AlliedSignal, Inc.

3. **Named Dischargers:** AlliedSignal Inc. is named as a discharger because it owned the business (Baron Blakeslee) that caused soil and groundwater pollution and because it leased the property at the time that the pollution occurred.

Gallade, the current owner of the property, is not named as a discharger in this order for the following reasons: AlliedSignal has adequate financial resources to comply with this order; AlliedSignal has complied with the prior order; and both AlliedSignal and Gallade have requested that Gallade not be named in this order. However, Gallade may be named in future if these circumstances change.

Baron Blakeslee/Del and Purex Corporation have operated solvent recovery operations and caused soil and groundwater pollution at the site. They are not named as dischargers in this order for the following reasons: AlliedSignal has adequate financial resources to comply with this order; AlliedSignal has complied with the prior order; and AlliedSignal has requested that Baron Blakeslee/Del and Purex Corporation not be named in this order. However, both Baron Blakeslee/Del and Purex Corporation may be named in future if these circumstances change.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the State, the Board will consider adding that party's name to this Order.

4. **Regulatory Status:** This site was subject to the Board Site Cleanup Requirements (Order No. 95-132) adopted on June 21, 1995. The purpose of revising the existing Site Cleanup Requirements Order No. 95-132 is to implement and evaluate the effects of interim remedial actions; and to prepare a remedial action plan.

In 1992, DTSC issued a hazardous waste facility permit to Baron Blakeslee, Inc. The permit allowed Baron Blakeslee, Inc., to treat and store spent solvents. In 1993, Baron Blakeslee Inc. implemented closure activities for the site. Because closure performance standards were not achieved during the closure, DTSC required Baron Blakeslee to submit a post-closure application to address the remaining impacted soil and groundwater at the site. The tasks in this order will provide information necessary to address the post-closure application.

5. **Site Hydrogeology:** The site is located within the Niles Cone groundwater basin. The Newark Aquitard is the uppermost clay unit covering nearly all of the Niles subarea, and is underlain by three identified aquifers, namely, the Newark Aquifer, Centerville-Fremont Aquifer and the Deep Aquifer. Each of these aquifers is separated by an extensive clay aquitard. The Newark Aquifer is the uppermost aquifer within the Niles subarea. The depth of this aquifer ranges between 40 and 140 feet below ground surface (bgs). The thickness of this aquifer ranges from greater than 140 feet at the Hayward fault to less than 20 feet at its western edge near the San Francisco Bay. Lithologically, the site is characterized by a thin layer of fill materials underlain by three alluvial units. These units are collectively termed as the Shallow Zone for the purpose of this Order. Topographically, the site is relatively horizontal with an elevation of approximately 11 feet above Mean Sea Level (MSL). Groundwater levels in the shallow zone below the Site generally

range between 9 and 15 feet bgs, and the groundwater flow is generally to the west. Groundwater flow in the Newark Aquifer is to the southwest in the vicinity of the site.

6. **Remedial Investigation:** The site has been adequately characterized. On-site and off-site investigations showed the presence of impacted soils within on-site areas and impacted groundwater in both on-site and off-site areas. The results of the remedial investigations identified four separate areas having impacted soil and groundwater pollution from past releases of organic chemicals. These areas include the Former Process Building, the Spur Track Area, the Former Gasoline Fill Station and the Former Flammable and Non-Flammable Liquid Tank Farms. The principal chemical compounds detected in soil and shallow groundwater zone (0-20 feet) beneath the site include 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), tetrachloroethene (PCE), 1,1,1-trichloroethane and trichloroethene. Other chemicals detected sporadically or at low concentrations in soil and groundwater include total xylenes, methylene chloride, Freon 113, 1,2-dichloroethane (1,2-DCA), ethylbenzene and toluene. PCE is found in groundwater at concentrations up to 110,000 ppb and TCE is found at concentrations up to 300,000 ppb. The chemical compounds found in soil were similar to those detected in groundwater.

One of the three groundwater monitoring wells located in the Newark Aquifer indicated the presence of volatile organic compounds below maximum contaminant levels. Groundwater samples from the other two Newark Aquifer wells were non detect for VOCs.

7. **Interim Remedial Measures:** The facility is in the process of proposing and implementing soil remediation. Four separate areas having significant soil pollution have been recommended for excavation in the source removal interim remedial action workplan, dated June 19, 1998. These areas include, the Former Process Building, the Spur Track Area, the Former Gasoline Fill Station and the Former Flammable and Non-Flammable Liquid Tank Farms. Remedial measures for polluted groundwater have not been proposed or implemented yet. AlliedSignal, Inc., will assess remedial measures for groundwater based on groundwater quality data and site hydrogeology.
8. **Adjacent Sites:** Four neighboring sites are currently conducting groundwater cleanup under Board Order. These sites are FMC, Jones-Hamilton, Ashland Chemicals and Romic. All four sites are cross gradient of this facility.
9. **Groundwater Management:** The Alameda County Water District (ACWD) manages groundwater resources in the Newark, Union City, and Fremont area. On average 35% of the residents' water supply comes from groundwater, most of this from well fields located about 5 miles east of the site. ACWD's management activities address saltwater intrusion caused by past overdrafting of the Newark Aquifer and deeper aquifers for domestic and agricultural uses. ACWD has reversed the overdrafting by recharging imported water and operates several extraction wells to remove high salinity groundwater from the Newark Aquifer and deeper aquifers within the Niles Cone (Aquifer Reclamation Program or ARP). ACWD is planning on treating a portion of its ARP pumpage for potable use with a proposed desalination plant about 1.5 miles southeast of the site.

In the late 1970s, ACWD initiated construction of an alignment of extraction wells in the Newark Aquifer to serve as salinity barrier curtain. The curtain has been planned to expand in a north-south direction, just inland of the salt evaporation ponds, for the entire width of the Niles Cone. The Salinity Barrier Project (SBP) wells would serve two functions: (i) prevent salt water intrusion during drought periods and (ii) hasten the removal of saline groundwater in the Newark Aquifer east of the SBP wells. At this time, ACWD has completed construction of five wells, including one within 3,000 feet of the site. Installation of additional wells has been postponed pending a re-evaluation of the project.

Chloride concentrations in the Newark Aquifer beneath the site range from 15,000 to 20,000 ppm, mainly as a result of saltwater intrusion. The site is located west (or bayward) of the proposed SBP wells. Chloride concentrations are therefore not expected to decline, even after extended operation of SBP wells.

However, implementing the SBP may accelerate the migration of VOCs in shallow groundwater, both laterally and vertically. If significant VOC concentrations migrate to the SBP wells, then ACWD may be required to treat SBP well pumpage prior to discharging it to surface waters or blending it with raw water for beneficial use. The potential beneficial uses of groundwater, beneath the site exist only to the extent that this groundwater is actively managed by the ACWD as part of its salinity management program.

One option for remedial action at this site is to establish an enforceable mechanism requiring the discharger to provide (or pay for) wellhead treatment of VOCs at the SBP wells, if treatment is necessary to meet applicable water quality standards. This option should be addressed in a draft remedial action plan for the site.

10. **Basin Plan:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

The potential beneficial uses of groundwater underlying and adjacent to the site include:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply
- e. Freshwater replenishment to surface waters.

At present, there is no known use of groundwater underlying the site for the above purposes.

The existing and potential beneficial uses of the Plummer Creek, a tidal tributary of South San Francisco Bay, include:

- a. Water contact and non-contact recreation
- b. Wildlife habitat
- c. Cold freshwater and warm freshwater habitat
- d. Fish migration and spawning
- e. Estuarine habitat

11. **Other Board Policies:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels.

12. **State Water Board Policies:** State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives.

State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

13. **Preliminary Cleanup Goals:** The dischargers will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remedial investigation, interim remedial actions, and the draft cleanup plan. Pending the establishment of site-specific cleanup standards, the following preliminary cleanup goals should be used for these purposes:

- a. Groundwater: Applicable water quality objectives (e.g. maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, risk-based levels (e.g. drinking water equivalent levels).
- b. Soil: 1 mg/kg total volatile organic compounds (VOCs), 10 mg/kg total semi-volatile organic compounds (SVOCs), and background concentrations of metals.

14. **Basis for 13304 Order:** The dischargers has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
15. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.
16. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
17. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
18. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. TASKS

1. **COMPLETION OF INITIAL INTERIM REMEDIAL ACTIONS AND ALTERNATIVES EVALUATION - SOIL**

COMPLIANCE DATE: January 29, 1999

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the source removal interim remedial action workplan, dated June 19, 1998 as it applies to the former process building "hot spot" area. The technical report shall contain the results of an alternative assessment for the remainder of the site. This assessment will document alternative interim remedial action methods, recommend one or more alternatives, and provide a schedule for implementation.

2. **COMPLETION OF INTERIM REMEDIAL ACTIONS - SOIL**

COMPLIANCE DATE: April 30, 1999

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 1 report. For ongoing actions such as soil vapor extraction, the report should document start-up as opposed to completion. If the interim remedial measures are proposed to be implemented in phases, each phase should have a workplan followed by a technical report.

3. **INTERIM REMEDIAL ACTION WORKPLAN - GROUNDWATER**

COMPLIANCE DATE: April 1, 1999

Submit a workplan acceptable to the Executive Officer to evaluate interim remedial action alternatives and to recommend one or more alternatives for implementation. The workplan should specify a proposed time schedule. If groundwater extraction is selected as an interim remedial action, then one task will be the completion of an NPDES permit application for discharge of extracted, treated groundwater to waters of the State. The application must demonstrate that neither reclamation nor discharge to the sanitary sewer is technically or economically feasible.

4. **COMPLETION OF INTERIM REMEDIAL ACTIONS - GROUNDWATER**

COMPLIANCE DATE: October 1, 1999

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the groundwater interim remedial action workplan. For ongoing actions, such as soil vapor extraction or groundwater extraction, the report should document start-up as opposed to completion. If the interim remedial measures are proposed to be

implemented in phases, e.g. on-site soil, on-site groundwater, and off-site groundwater, each part should have a workplan followed by a technical report. The last report shall be submitted by the date specified above.

5. **PROPOSED FINAL REMEDIAL ACTIONS AND CLEANUP STANDARDS**

COMPLIANCE DATE: April 1, 2000

Submit a technical report acceptable to the Executive Officer containing:

- a. Results of the remedial investigation
- b. Evaluation of the installed interim remedial actions
- c. Feasibility study evaluating alternative final remedial actions
- d. Risk assessment for current and post-cleanup exposures
- e. Recommended final remedial actions and cleanup standards
- f. Implementation tasks and time schedule

Item c should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action. Item c should also address the wellhead treatment option cited in finding 9.

Items a through c should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code Section 25356.1(c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

Items a through e should consider the preliminary cleanup goals for soil and groundwater identified in finding 13.

6. **Delayed Compliance:** If the discharger is delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.

C. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).

2. **Good Operation and Maintenance (O&M):** The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The discharger shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the discharger shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
5. **Self-Monitoring Program:** The discharger shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
 - a. City of Newark Fire Department

- b. Cal/EPA-Department of Toxic Substances Control (Permitting Branch)
- c. Alameda County Water District
- d. Alameda County Health Department

The Executive Officer may modify this distribution list as needed.


- 9. **Reporting of Changed Owner or Operator:** The discharger or its designee shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
- 10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

- 11. **Rescission of Existing Order:** This Order supercedes and rescinds Order No. 95-132.
- 12. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. The discharger may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 21, 1998.



Loretta K. Barsamian
Executive Officer

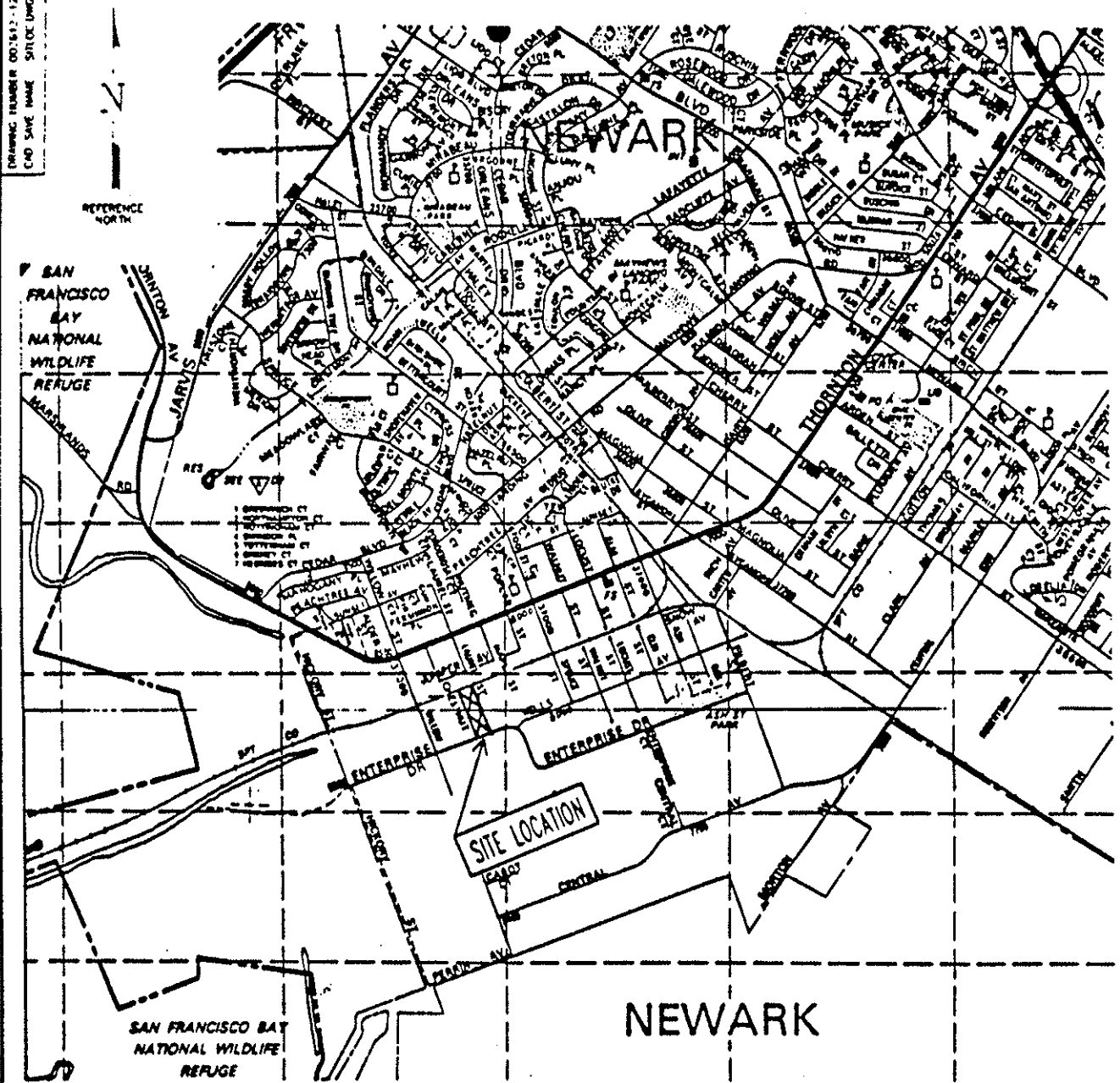
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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

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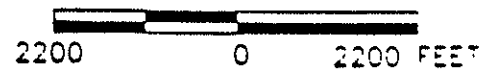
Attachments: Site Map
Self-Monitoring Program

DRAWING NUMBER 001542-12 A1
 CNO SAVE NAME SITELOC.DWG



NEWARK

SCALE



REFERENCES. THE THOMAS GUIDE.
 SAN FRANCISCO, ALAMEDA AND CONTRA COSTA
 COUNTIES STREET GUIDE AND DIRECTORY
 1991, UPDATED EDITION

RADIAN
 INTERNATIONAL LLC

SITE LOCATION MAP
 BARON-BLAKESLEE FACILITY
 NEWARK, CALIFORNIA

CLIENT: ALLIEDSIGNAL INC

DATE: 4-15-97
 SCALE: 1" = 1/2 MILE

FIGURE 1

PROJECT NUMBER: 001542-12

4-19-96 ISSUED FOR FIRST QUARTER 1997 REPORT
 NO. 1 DATE: 4-19-96 ISSUE/REVISION

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

ALLIEDSIGNAL, INCORPORATED

for the FORMER BARON BLAKESLEE FACILITY located at
8333 ENTERPRISE DRIVE
NEWARK, ALAMEDA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 98-108 (site cleanup requirements).
2. **Monitoring:** The discharger shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following schedule:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
MW-1	Q/SA	8010	MW-6	Q/SA	8010
MW-2	Q/SA	8010	MW-7	Q/SA	8010
MW-3	Q/SA	8010	MW-8	Q/SA	8010
NWNE W1	Q/SA	8010	NWNE W1	Q/SA	8010
MW-4	Q/SA	8010	MW-9	Q/SA	8010
MW-5	Q/SA	8010	MW-10	Q/SA	8010

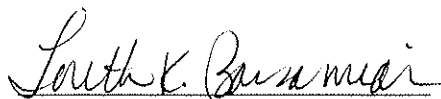
Key: Q/SA = Quarterly for the first year through calendar year 1999 and semi-annually for subsequent years
8010 = EPA Method 8010 or equivalent

The discharger shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The discharger may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Monitoring Reports:** The discharger shall submit semi-annual monitoring reports to the Board no later than 30 days following the end of the semi-annual period (e.g. report for July through December period due January 31). The first semi-annual monitoring report shall be due on January 31, 1999. The reports shall include:
- a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
 - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the second semi-annual report each year.
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the second semi-annual report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
 - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the period. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the period. Historical mass removal results shall be included in the second semi-annual report each year.
 - e. **Status Report:** The semi-annual report shall describe relevant work completed during the reporting period (e.g. interim remedial measures) and work planned for the following period.

4. **Violation Reports:** If the discharger violates requirements in the Site Cleanup Requirements, then the discharger shall notify the Board office by telephone as soon as practicable once the discharger have knowledge of the violation. Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five working days of telephone notification.
5. **Other Reports:** The discharger or its designee shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
6. **Record Keeping:** The discharger or their agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
7. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on October 21, 1998.


Loretta K. Barsamian
Executive Officer